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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,560	06/30/2003	**Andrew J. Carroll**	020431.1292	5995

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EXAMINER	
LEE, PHILIP C	

ART UNIT	PAPER NUMBER
2448	

NOTIFICATION DATE	DELIVERY MODE
09/14/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/611,560	CARROLL ET AL.	
	Examiner	Art Unit	
	PHILIP C. LEE	2448	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 December 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *39-74* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *39-74* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. This action is responsive to the amendment and remarks filed on December 17, 2009.

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/17/09 has been entered.

3. Claims 39-74 are presented for examination and claims 1-38 are canceled.

4. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

Claim Rejections – 35 USC 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 63-74 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Regarding claim 63, it is a computer readable media claim. Such a media includes signal media under broadest reasonable interpretation. Signals are not patentable subject matter. Therefore, the claim is

rejected as covering non-statutory subject matter. Please amend the claim to recite "non-transitory computer readable media...", to clarify the claim does not include signals and thus covers only statutory subject matter. Claims 64-74 are rejected for the similar reasons.

Claim Rejections – 35 USC 103

7. Claims 39, 43-44, 46-51, 55-56, 58-63, 67-68, 70-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram et al, U.S. Patent 6,996,589 (hereinafter Jayaram) in view of Fagin et al, U.S. Patent 7,149,746 (hereinafter Fagin).

8. Jayaram was cited in the previous office action.

9. As per claims 39, 51 and 63, Jayaram teaches the invention substantially as claimed for providing bulk data transfers between one or more data stores (col. 11, lines 1-11), comprising:

a data integration server (combination of 220, 234, 235, 250, 260, 270 of fig. 2) coupled with the one or more data stores (col. 3, lines 33-52; col. 10, lines 56-63; col. 11, lines 1-11) (system with the database conversion engine connected to the source database and target database), the data integration server comprising:

a plurality of programmatic source interfaces (234, fig. 2, data filters with source extract format specification; col. 14, lines 20-22) coupled with one or more source data stores (connected for data transmission with the source data 225 of source system 320 as shown

in fig. 2), wherein the plurality of programmatic source interfaces are defined according to a source interface specification (defined according to source extract format specification)(col. 11, lines 1-5) and are exposed during a bulk data transfer (abstract), one or more data entities are extracted from the one or more source data stores (data filters are accessible for use during bulk transfer to enable the system to receive/pull source data for loading into the target system)(col. 11, lines 5-11; col. 11, line 64-col. 12, line 10); and

a plurality of programmatic target interfaces (270, fig. 2, data upload process consists of tools such as SQL loader (sqlldr; col. 18, lines 56-61) with target scheme specification and mapping specification) coupled with one or more target data stores (data upload process coupled to the target system 310 as shown in fig. 2), wherein the plurality of programmatic target interfaces are defined according to a target interface specification (defined according to target scheme specification and mapping specification)(col. 11, lines 5-11) and are exposed during the bulk data transfer (abstract), one or more of the extracted data entities are loaded into the one or more target data stores (data upload accessible for use during bulk transfer to enable the system to upload the source data to the target system)(col. 11, lines 5-11; col. 12, lines 31-34).

10. Although Jayaram teaches interfaces exposed within the data integration server during a bulk data server (abstract), wherein the data integration server reads data entities directly from and writes data entities directly to the one or more relational data stores during the bulk data transfer (col. 11, lines 5-11; col. 11, line 64-col. 12, line 10), however, Jayaram does not

specifically teach relational interfaces. Fagin teaches one or more relational interfaces (new or alternate mappings), each relational interface coupled with a corresponding relational data store (e.g., coupled to 205 and 210), wherein a server (e.g., couputer 15) reads data entities directly from and writes data entities directly to the one or more relational data stores during data transfer without using the plurality of programmatic source interfaces or the plurality of programmatic target interfaces (col. 4, lines 7-29; col. 13, lines 5-22; col. 21, lines 32-43).

11. Because Jayaram and Fagin teach similar method of interfacing systems for data transfer, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use known technique of alternative relational interfaces of Fagin's system to improve similar method of interfacing systems for data transfer in Jayaram's system in the same way. By using the known technique of alternative relational interfaces, it would allow Jayaram's system to provide alternative mappings for interfacing transferred data between the systems.

12. As per claims 43, 55, and 67, Jayaram and Fagin teach the invention substantially as claimed in claims 39, 51, and 63 above. Jayaram further teach loading data entities comprises inserting, updating, or deleting data entities (col. 11, lines 1-11) (uploading data must comprises inserting data into a target system).

13. As per claims 44, 56, and 68, Jayaram and Fagin teach the invention substantially as claimed in claims 39, 51, and 63 above. Jayaram further teach define one or more resources within each of the plurality of programmatic source interfaces and the plurality of programmatic

target interfaces which represent data entities within the one or more data stores (col. 14, lines 18-22) (data filter and data upload comprise source extract format specification, mapping specification and target scheme specification, representing the format of data); and in response to a request to execute a bulk data transfer involving one or more resources within the one or more data stores, (col. 10, lines 56-63) (instructions served to the system for executing of schedule conversion and uploading must include request to execute), create each of the plurality of programmatic source interface and the plurality of programmatic target interfaces within which at least one of the resources is defined (col. 14, lines 26-28) (in response to conversion, generate source extract format specification within which format is defined).

14. As per claims 46, 58, and 70, Jayaram and Fagin teach the invention substantially as claimed in claims 44, 56, and 68 above. Jayaram further teach the plurality of programmatic source interfaces and the plurality of programmatic target interfaces are defined within each session interface (col. 16, lines 24-26); each session interface isolates from a defined programmatic source interface and programmatic target interface details associated with export and import of resources involved in a bulk data transfer (col. 16, lines 26-52); and the data integration server is further configured to, in connection with creating the plurality of programmatic source interfaces and the plurality of programmatic target interfaces, create each session interface within which at least one of the plurality of programmatic source interfaces and the plurality of programmatic target interfaces is defined (col. 16, lines 21-26).

15. As per claims 47, 59, and 71, Jayaram and Fagin teach the invention substantially as claimed in claims 46, 58, and 70 above. Jayaram further teach session interface persists, once created, either for the entirety of the bulk data transfer or for the entirety of multiple data transfers according to its definition (col. 16, lines 22-52).

16. As per claims 48, 60, and 72, although Jayaram teaches allow each of the plurality of programmatic source interfaces and the plurality of programmatic target interfaces to produce or consume data entities in a desired format (col. 11, line 57-col. 12, line 22); convert data entities produced in a first format particular to a programmatic source interface to a second format particular to a programmatic target interface (col. 5, lines 50-63), however, Jayaram and Fagin do not teach convert only if necessary because the first and second formats are different. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include conversion of data only if the first and second formats are different in order to avoid inefficient process of conversion between data stores of the same format.

17. As per claims 49, 61, and 73, Jayaram and Fagin teach the invention substantially as claimed in claims 39, 51, and 63 above. Fagin further teach wherein the one or more relational interfaces is used as alternatives to one or more of the plurality of programmatic source interfaces and one or more of the plurality of programmatic target interfaces (col. 4, lines 7-29; col. 13, lines 5-22; col. 21, lines 32-43).

18. As per claims 50, 62, and 74, Jayaram and Fagin teach the invention substantially as claimed in claims 49, 61, and 73 above. Jayaram further teach an interface schema file providing a database-neutral description of a physical database schema of the corresponding relational data store (col. 2, liens 39-55); and an interface mapping file providing a logical-to-physical mapping for all data entities defined for the relational interface to enable the data integration server to execute bulk data transfers between relational data stores having different physical database schema (col. 16, lines 22-41).

19. Claims 45, 57, and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram and Fagin in view of Jennyc et al, U.S. Patent 6,334,158 (hereinafter Jennyc).

20. Jennyc was cited in the previous office action.

21. As per claims 45, 57, and 69, although Jayaram teach programmatic interface persist, once created for the entirety of the bulk data transfer and for the single step of the bulk data transfer (col. 11, lines 1-11), however, Jayaram and Fagin do not teach release of interface. Jennyc teaches programmatic interface persists, once created: if a programmatic source interface, for the data transfer before resources of the programmatic source interface are released (col. 20, line 65-col. 21, line 5); and if a programmatic target interface, for the data transfer before resources of the programmatic target interface are released (col. 20, line 65-col. 21, line 5).

22. Because both Jayaram, Fagin and Jennyc teach similar method of interfacing systems for data transfer, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use known technique of release of interface of Jennyc's system to improve similar method of interfacing systems for data transfer in Jayaram's and Fagin's systems in the same way. By using the known technique of release of interface, it would allow Jayaram's and Fagin's systems to allocate the released resources to other processes.

23. Claims 40, 52, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram and Fagin in view of Shannon et al, U.S. Patent Application Publication 2002/0046301 (hereinafter Shannon).

24. Shannon was cited in the previous office action.

25. As per claims 40, 52, and 64, Jayaram and Fagin do not teach Java interfaces. Shannon teaches Java interfaces ([0031] and claim 5).

26. Because both Jayaram, Fagin and Shannon teach similar method of interfacing systems for data transfer, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use known technique of JAVA interface of Shannon's system to improve similar method of interfacing systems for data transfer in Jayaram's and Fagin's systems in the same way. By using the known technique of JAVA interface, it would allow Jayaram's and Fagin's systems to map transferred data between the systems.

27. Claims 41-42, 53-54, and 65-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jayaram and Fagin in view of Casagrande et al, U.S. Patent 6,381,709 (hereinafter Casagrande).

28. Casagrande was cited in the previous office action.

29. As per claims 41, 53, and 65, Jayaram and Fagin teach the invention substantially as claimed in claims 39, 51 and 63 above. Although Jayaram teaches the plurality of programmatic source interfaces and the plurality of programmatic target interfaces are exposed supporting bulk data transfers (col. 11, lines 1-5; col. 11, lines 1-11), however, Jayaram and Fagin do not teach industry standard interface and industry standard protocol. Casagrande teaches an interface supporting data transfer according to an industry standard protocol (fig. 4, col. 8, lines 60-67).

30. Because both Jayaram, Fagin and Casagrande teach similar method of interfacing systems for data transfer, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use known technique of FTP interface of transferring data in Casagrande's system to improve similar method of interfacing systems for data transfer in Jayaram's and Fagin's systems in the same way. By using the known technique of FTP interface, it would allow Jayaram's and Fagin's systems to exchange data between systems on a network.

31. As per claims 42, 54 and 66, Jayaram, Fagin and Casagrande teach the invention substantially as claimed in claims 41, 53 and 65 above. Although Jayaram teaches receive a request from a client indicating that the client is extracting data from one or more source data stores and loading data into one or more target data stores (col. 13, lines 14-48); create a plurality of programmatic source interfaces to enable extraction of the data from the one or more source data stores (col. 13, lines 14-48; col. 13, lines 49-63; col. 14, lines 25-28); create a plurality of programmatic target interface to enable loading of the data into the one or more target data stores (col. 18, lines 56-61); for data extraction, as the plurality of programmatic source interface produce the data extracted from the one or more source data stores, send the outgoing data to a client (col. 10, line 64-col. 11, line 15); and for data loading, as the data arrives from the client, send the incoming data to the plurality of programmatic target interfaces for loading into the one or more target data stores (col. 10, line 64-col. 11, line 15), however, Jayaram and Fagin do not teach industry standard protocol. Casagrande teaches an interface supporting data transfer according to an industry standard protocol (fig. 4, col. 8, lines 60-67).

32. Because both Jayaram, Fagin and Casagrande teach similar method of interfacing systems for data transfer, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to use known technique of FTP interface of transferring data in Casagrande's system to improve similar method of interfacing systems for data transfer in Jayaram's and Fagin's systems in the same way. By using the known technique of FTP interface, it would allow Jayaram's and Fagin's systems to exchange data between systems on a network.

33. Although Jayaram teaches for data extraction, as the plurality of programmatic source interface produce the data extracted from the on or more source data stores, sending the outgoing data to a client (e.g., target database as the client receiving the source data)however, Jayaram, Fagin and Casagrande do not specifically teach sending the outgoing data to *the* client. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include sending the source data to any client (i.e., to send data from source to target or from target to source) because by doing so it would allow data transfer between any source to any client.

34. Applicant's arguments with respect to claims 39-74, filed 12/17/09, have been fully considered but they are not persuasive.

35. In the remark, applicant argued that:

> (1) Jayaram fails to teach one or more relational interfaces, each relational interface coupled with a corresponding relational data store and exposed within the data integration server during a bulk data transfer, wherein the data integration server reads data entities directly from and writes data entities directly to the one or more relational data stores during the bulk data transfer without using the plurality of programmatic source interfaces or the plurality of programmatic target interfaces.
>
> (2) Jayaram fails to teach one or more relational interfaces used as alternatives to the plurality of programmatic source interfaces and the

plurality of programmatic target interfaces to reduce complexity of the bulk data transfer.

(3) Office action fails to establish a prima facie case of obviousness based on the "Examination Guidelines for Determining Obviousness under 35 USC 103 in view of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*"

(4) The office action has not shown the factual findings necessary to establish obviousness or even an explanation to support the obviousness rejection based on the proposed combination of Jayaram, Jennyc, Shannon, and Casagrande.

(5) Office action fails to provide an indication of the level of ordinary skill.

(6) Office action fails to explain why the difference between the combination of Jayaram, Jennyc, Shannon, Casagrande, and the claimed invention would have been obvious to one of ordinary skill in the art.

(7) The office action must include explicit analysis of the rationale relied upon by the examiner for supporting the selection and combination of Jayaram, Jennyc, Shannon, and Casagrande to render obvious Applicants' claimed invention.

36. In response to points (1), applicant's argument is moot in view of new ground of rejection.

37. In response to point (2), in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., as alternatives… to reduce complexity of the bulk data transfer) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

38. In response to points (3), (5) and (6), applicant's arguments have been considered and addressed to in the office action mailed on 10/29/08.

39. In response to points (4) and (7), the office action has established a prima facie case of obviousness based on the "Examination Guidelines for Determining Obviousness under 35 USC 103 in view of the Supreme Court decision in *KSR International Co. v. TeleFlex Inc.* Specifically, the established prima facie case of obviousness has been established based on the rationale of "use of known technique to improve similar method in the say way" for supporting the conclusion of obviousness. As stated in the rejection above, Jayaram teaches a method for transferring data between a source and a target via programmatic interfaces (col. 11, lines 1-11). The method indicates the programmatic interfaces persist for the duration of the data transfer. Jennyc teaches releasing all resources of programmatic interfaces used for the data transfer. It would be obvious to one of ordinary skill in the art to use the technique of releasing resource of Jennyc reference to release the resources used by the programmatic interface for data transfer as

taught by the Jayaram's reference. Using the known technique of releasing resource for data transfer would provide allocation of released resource to other processes desired by the data transfer system of Jayaram's reference would have been obvious to one of ordinary skill in the art. Based on the rationale of "Simple substitution of one know equivalent element for another to obtain predictable results", a prima facie case of obviousness has been established for the combination of Casagrande with Jayaram and Jennyc. References Jayaram and Jennyc teach methods of interfacing systems for data transfer. The data is transferred using programmatic interfaces. References Jayaram and Jennyc do not teach using File Transfer Protocol (FTP) interface as the programmatic interface for file transfer. Casagrande teaches transferring data using FTP interface. Because Jayaram, Jennyc and Casagrande teach method for interfacing systems for data transfer, it would be obvious to one skilled in the art to substitute one interface for the other to achieve the predictable result of transferring/exchanging data between systems on a network. Based on the same rationale of "Simple substitution of one know equivalent element for another to obtain predictable results", Similar analysis as set forth for the combination of Casagrande with Jayaram and Jennyc can be used to establish a prima facie case of obviousness for the combination of Shannon with Jayaram and Jennyc.

40. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Lee whose telephone number is (571)272-3967. The examiner can normally be reached on 8 AM TO 5:30 PM Monday to Thursday and every other Friday. If attempts to reach the examiner by telephone are

unsuccessful, the examiner's supervisor, Firmin Backer can be reached on (571) 272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Philip C Lee/

Primary Examiner, Art Unit 2448